National, transborder and commercial electronic identification hub

(Krajowy, Transgraniczny oraz Komercyjny Węzeł Identyfikacji Elektronicznej)

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Abstract – The authors stressed the possibilities resulted from the usage of online services by prior confirmation of the user's identity. The connection of various systems of electronic identification delivers many means of electronic identification. Thanks to them users are authenticated. Then the main aims of National Electronic Identification Node were talked over. Moreover, the importance, in widespreading of exercise of digital services in Polans, was underlined. What is more the attention to Cross-Boarder Node was payed which was integrated with other electronic identification systems in different countries in EU and the tasks of Commercial Hub.

Key words **–** National Electronic Identification Node, Cross-Boarder Node, Commercial Hub.

Streszczenie – Autorzy podkreślili możliwości jakie daje korzystanie z usług online po wcześniejszym potwierdzeniu tożsamości użytkowników. Przyłączanie do węzła różnych systemów identyfikacji elektronicznej , dostarcza wielu środków identyfikacji elektronicznej dzięki którym użytkownicy przechodzą proces uwierzytelnienia. Następnie zostały omówione cele Krajowego Węzła Identyfikacji Elektronicznej, podkreślono znaczenie w upowszechnieniu oraz ułatwieniu korzystania z usług cyfrowych w Polsce. Zwrócono także uwagę na rolę Węzła Transgranicznego zintegrowanego z pozostałymi systemami identyfikacji elektronicznej innych krajów Unii Europejskiej oraz zadania Węzła Komercyjnego.

Słowa kluczowe Krajowy Węzeł Identyfikacji Elektronicznej, Węzeł Transgraniczny, Węzeł Komercyjny.

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Authors' contributions to the article:
A. The idea and the planning of the study
B. Gathering and listing data
C. The data analysis and interpretation
D. Writing the article
E. Critical review of the article
F. Final approval of the article

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I. INTRODUCTION

Electronic Identification Node is a system which integrates in one place the data communication systems and electronic identification systems. It ensures a possibility to use the online service by prior confirmation of user's identity. The connection to the node of various electronic identification systems provides many means of electronic identification. Thanks to them users are identify [1].

II. NATIONAL ELECTRONIC IDENTIFICATION NODE

National Node is an organizational and technical solution which enables the identification of the user of IT system. This system benefits from the online service with the usage of mean of electronic identification given in elec-

tronic identification system which is connected to this Node directly or through the agency of cross-boarder node [2]. The aim of The National Electronic Identification Node is to disseminate and enable the use of the digital services, for the Polish citizens, by simplification the procedure of logon, into use of universal login and suitable secured packet of password. The Node will be found at the address login.gov.pl. The National Electronic Identification Node is suppose to mediate in authentication in the area of national online services with the help of electronic identifications' means, released by various institutions within electronic identifications systems. The permission to connect the system with the National Electronic Identification Node, is given by the Minister of Digitization. This decision relies on the fulfilment of the essential security requirements and reliably documented, public as well as private, subjects [1]. Creating of the National Node is realized within the scope of project, financed from the national budget, coordinated by the Ministry of Digitization in collaboration with the Central Computing Center [3].

III. THE CROSS BORDER NODE OF ELECTRONIC IDENTIFICATION

The purpose for which Cross Border Node is being created, as in the case of the National Node, is to improve the accessibility to electronic services. However, the scope of action of this system will be bigger, what will enable the Polish citizens, by using Trusted Profile, to benefit form the digital services of the EU nations. The foreigners will also have the opportunity to use the polish electronic service systems (ePUAP, PUE ZUS) by using their own login and password. The Cross Border Node will be integrated with other countries of EU systems of electronic identification. Only notified (accepted in terms of safety) systems of login will be allowed to Cross-border Node [2]. In case of Poland it is trusted ePUAP profile. The institution which carries on the project of creation the National Node is the Ministry of the Digitalization in association with State Research Institute NASK and Institute of the mathematical computing devices [4].

IV. COMMERCIAL ELECTRONIC IDENTIFICATION HUB

Some works on Commercial Electronic Identification Hub created by National Clearing House have been led concurrently with the initiation of the National Electronic Identification Hub. The main task of the Commercial Hub will be an identification in the commercial electronic services, though further plans predict an integration with the National Hub. The model, in which allowed to realisation of national public administration services are subjects that create commercial hubs and its elements, is named the federal model. In the process of authentication in public services take part a national hub in the first place, but allowed is commercial hub too. On the contrary, in commercial services the conformance of identity takes place only by means of commercial hub. That solution does not cause needless competitions between national providers of electronic identification means and commercial ones. Additionally in some (limited) way country is in termite control on the market of commercial services providers. [5]

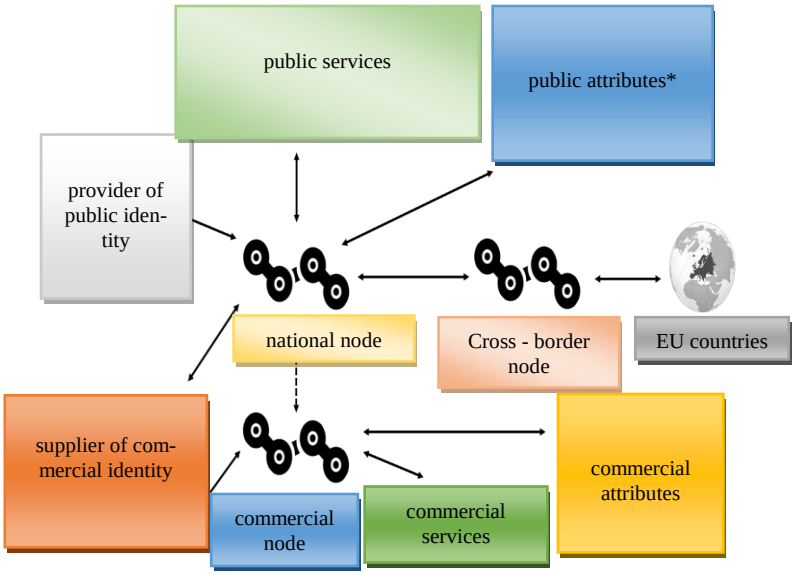

Figure 1. An architecture of a planned system of Electronic Identification Hubs in Poland. [own elaboration based on: 5,6]

*Attributes are facultative and individual identifiers serving the verification of a natural person or a corporate person, which can be applied to the aggravated certifications, provided that they do not disturb the transgenic interoperatility [7]

ELECTRONIC COMMUNICATION SYSTEM

The working of Electronic Identification Hubs in the countries of the European Union on the basis of the international standards (mainly the regulation of elDAS) enables the functioning of the electronic communication

system [7]. It gives citizens of EU countries a possibility to use transboundary online services in all member states with use of own national identifier. In th list below there is an illustrated example of a Polish citizen who wants to get information on the history of his assistance in the Czech Republic.

Stages of electronic communication (Figure 2):

Reporting willingness to get data from The Czech Republic Assistance Institution by a Polish citizen.

1. Reporting willingness to get data from The Czech Republic Assistance Institution by a Polish citizen.
2. Reporting for the authentication.
3. A request for a method of authentication
4. The chosen method is ePUAP platform.
5. Messaging the communication that the Polish citizen wants to authenticate himself in the Czech Republic Assistance Institution with use of ePUAP platform.
6. Authorization request
7. Request for giving identifier and password
8. Entering the identifier and the passowrd
9. Confirming the correctness of the password
10. A message requiring the confirmation that The Czech Republic Assistance Institution wants to know the personal data of the Polish citizen.
11. Giving consent to sharing the data.
12. Confirmed Polish citizen's data messaged in the form of the mean of electronical identifical from the Polish eIDAS.
13. Confirmed Polish citizen's data messaged in the form of the mean of electronical identifical from the Czech eIDAS.
14. Providing the citizen with the data from the Czech Republic Assistance Institution.

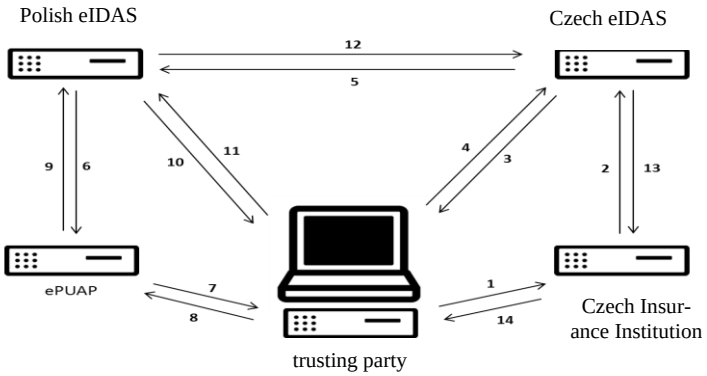

Figure 2. An example of electronic communication model using eIDAS nodes [own elaboration based on: 8]

Furthermore, contact between servers is in principle fast and without any delay, only the moment of entering the identifier and the password takes slighly more time. Communication between different EU countries may look as in the above-mentioned way, provided that the systems are distracted and based on domestic interchange [8].

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